

FAT & TRABE

37A -27 -37B Fig. 2B Fig. 2A Fig. 5

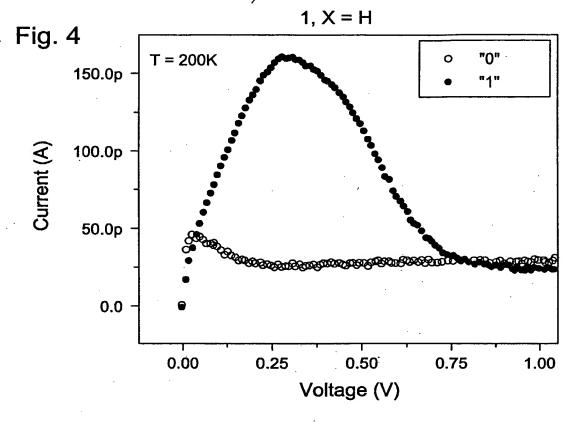


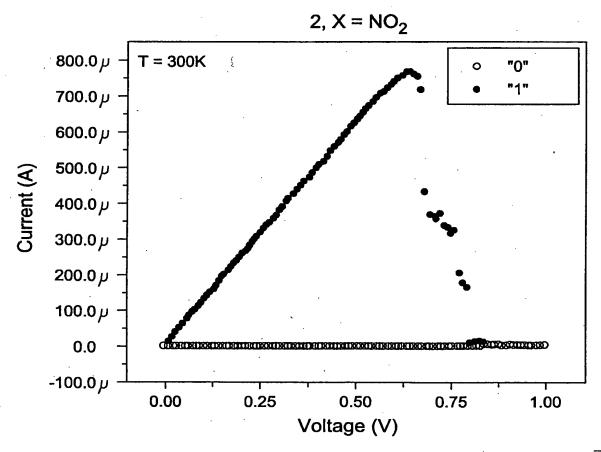
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July 25, 2001
Programmable Molecular Dev 1789-05303
Marcella D. Watkins 713/238-8000

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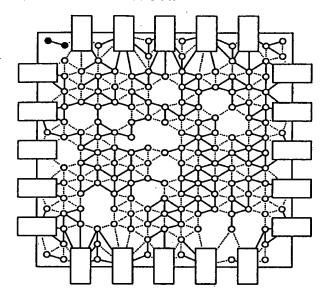
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$$30$$
 35
 NO_2
 32
 34
 $1, X = H$
 $2, X = NO_2$
Fig. 3

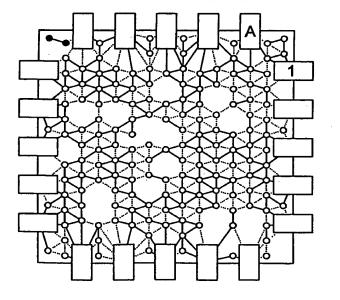
Untrained Nanocell

Fig. 7



Nanocell Trained as Inverter

Fig. 8



Inverter Truth Table			
Input A	Output 1		
0 .	1		
1	0 .		



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$$X = Y = N$$

 $X = CH =, Y = N$

$$X = N, Y = CH$$

NO₂ H₂N

X = N, Y = ethynylpyridine

X = CSAc, Y = ethynylpyridine

X = N, Y = phenyl

Fig. 6

Nanocell Trained as Nand

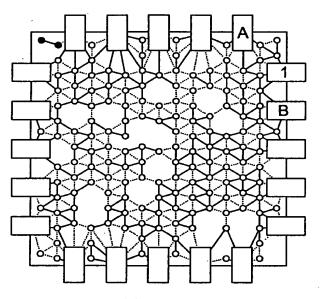
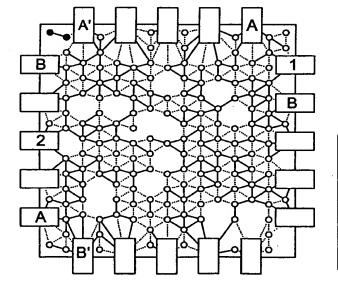


Fig. 9

Nand Truth Table				
Input A	Input B	Output 1		
0	0	1		
0	1	1		
1	0	1		
1	1	0		

Nanocell Trained as Inverse Half Adder

Fig. 10



Inverse of Half Adder Truth Table				
Input A	Input B	Output 1	Output 2	
0 -	0	1	1	
0	1	1	0	
1	0	1	0	
1	1	0	1	